

VIRTUAL IMAGE ARTIFACT DETECTION

Abstract

Artifacts are detected in a cyclopean virtual image generated from stereo images. A disparity map is generated from the stereo images. Individual projected images are determined based on the disparity map and the corresponding stereo images. A difference map is computed between the individual projected images to indicate the artifacts. A source patch in the virtual image is defined relative to an artifact. A replacement target patch is generated using a split-patch search technique as a composite of a background exemplar patch and a foreground exemplar patch. Each exemplar patch may be identified from an image patch selected from at least one of the stereo images. The source patch of the virtual image is replaced by the replacement target patch to correct the detected artifact.